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## METASTATIC TUMOR OF THE SPERMATIC CORD FROM RENAL CELL CARCINOMA

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A 56-year-old male visited our hospital with macroscopic hematuria. Physical and X-ray examinations showed he had right renal cell carcinoma with tumor thrombosis in the inferior vena cava and the right spermatic vein. Radical nephrectomy and tumor thrombectomy were performed and he was discharged with no evidence of disease 1 month after the operation. At 5 months after the discharge, he noticed a palpable mass in the scrotum. Right orchiectomy was performed. The tumor was located in the right spermatic cord and histological examination revealed it to be a renal cell carcinoma (clear cell subtype) which was a metastatic lesion from a right renal tumor. In this case, the renal cell carcinoma was considered to have retrogradely metastasized through the spermatic vein. In conclusion, a complete physical examination, including the spermatic cord is recommended during the follow-up period of renal cell carcinoma.

**Key words:** Renal cancer, Spermatic cord, Metastasis

### INTRODUCTION

Renal cell carcinoma is the third most common malignant tumor in urogenital malignant tumors. It has a poor prognosis. Although it spreads to any organ, the spermatic cord is a rare metastatic site<sup>1)</sup>. We report a patient with spermatic cord metastasis from renal cell carcinoma.

### CASE REPORT

A 56-year-old male visited our hospital with a months history of macroscopic hematuria. On examination, he had right renal cell carcinoma with tumor thrombosis in the inferior vena cava. The tumor thrombus was extending into the inferior vena cava and the right spermatic vein. Transperitoneal right radical nephrectomy and thrombectomy were performed. The resected tumor was 910 g in weight. Fig. 1 shows the surgical method (Fig. 1). The right spermatic vein was ligated at a site where the diameter was normal, so that in the stump there was no malignant tumor. Moreover, the inferior vena cava was partially clamped including the entrance of the right spermatic vein then cut and sutured. During the procedure, the left renal vein and the proximal and

distal part of the inferior vena cava were clamped. He was discharged one month after the operation. Five months after the discharge, he noted a palpable mass in the scrotum. Right orchiectomy was performed under the diagnosis of tumor of the right spermatic cord (Fig. 2). Histological examination revealed a metastatic tumor from renal cell carcinoma (clear cell subtype) (Fig. 3). Five months after the second operation, multiple lung and liver metastases appeared. Although he was treated with  $\alpha$ -interferon, he died of carcinomatosis about 1 year after the nephrectomy.

### DISCUSSION

Metastatic tumors of the spermatic cord are very rare, with approximately 50 cases have been reported in the literature. The primary sites of these tumors are generally the stomach and colon. Twelve cases of metastatic tumors of the spermatic cord from renal cell carcinoma have been reported<sup>2-10)</sup>. Six routes of metastases to the spermatic cord can be considered: 1) retrograde lymphatic extension, 2) retrograde venous extension, 3) arterial embolization, 4) retrograde ductal extension, 5) extension by direct peritoneal

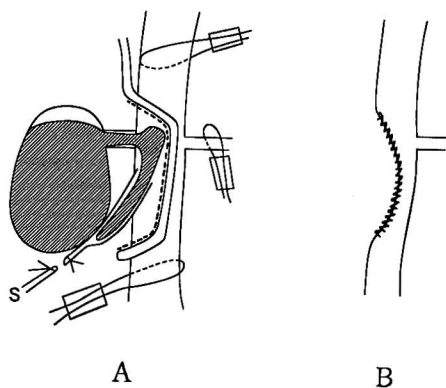



Fig. 1. A: Surgical procedures of nephrectomy and thrombectomy.  tumor. S; the right spermatic vein. B: post-operative feature of our case.

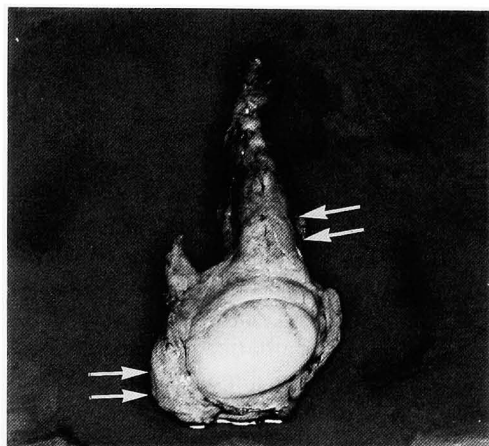


Fig. 2. Macroscopic findings of the spermatic cord with tumor (arrow), epididymis and testis

implant, and 6) direct invasion from continuous growth. In renal tumor, metastasis to the spermatic cord has occurred by routes 1), 2) and 6)<sup>2-4)</sup>. In our case, the renal cell carcinoma produced tumor thrombosis in the inferior vena cava and the right spermatic vein. Therefore, wedge resection of the inferior vena cava including a part of the right spermatic vein was performed. Although histological examination showed no malignancy in the stump of the spermatic vein, retrograde venous embolism was a possible route of metastasis in our case.

In conclusion, we consider a complete

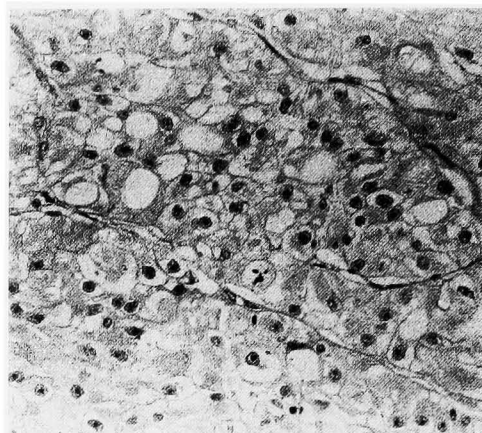


Fig. 3. Microscopic findings of the tumor of the spermatic cord. The renal cell carcinoma (clear cell subtype) display the same histological characteristics as those of the renal cell carcinoma previously treated (H&E,  $\times 210$ ).

physical examination, including the entire spermatic cord to be necessary during the follow-up period of renal cell carcinoma.

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## 和文抄録

### 精索転移をきたした腎細胞癌の1例

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患者は56歳, 男性で肉眼的血尿を主訴とし来院した。諸検査にて下大静脈腫瘍血栓を伴う右腎細胞癌の診断を得, 根治的右腎切除術および腫瘍血栓剥出術が施行された。剥除腫瘍は組織学的に renal cell carcinoma (clear cell subtype) であった。再発を認めず術後1カ月目に退院した。退院後6カ月目に陰嚢内の腫瘤にきづき来院し転移性精索腫瘍の診断の下に右精

巣摘除術が施行された。腫瘍は右精索に位置し組織学的には renal cell carcinoma (clear cell subtype) で腎細胞癌の転移と思われた。自験例は, 腎細胞癌が精索静脈を経て精索に転移をきたしたものと思われた。腎細胞癌では経過観察期間中, 精索も含めた全身の観察が必要である。

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